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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/581,377	03/29/2001	Wolfgang Retschke	140/01624	9733

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EXAMINER	
PHAM, HAI CHI	

ART UNIT	PAPER NUMBER
2861	

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/581,377	Applicant(s) RETSCHKE ET AL.	
	Examin r Hai C Pham	Art Unit 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38,81-83,89-102,104 and 111-115* is/are pending in the application.

4a) Of the above claim(s) *89-91* is/are withdrawn from consideration.

5)☒ Claim(s) *32-38,81-83,102 and 111-115* is/are allowed.

6)☒ Claim(s) *1-7,92-101 and 104* is/are rejected.

7)☒ Claim(s) *8-31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

FINAL REJECTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-7 and 104 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshida (U.S. 6,052,140).

Yoshida discloses an image forming apparatus and a method for writing a pattern on a surface (photosensitive material 106) with a scanning beam comprised of a plurality of independently addressable sub-beams (the sub-beams being emitted by the respective LEDs 208 in an on-off controllable manner, Fig. 5), the surface being scanned with said scanning beams a plurality of times, said sub-beams scanning the

surface side-by-side in the cross scan direction, each said sub-beam being modulated to reflect information to be written (a plurality of scanning lines being simultaneously performed during one scan operation in the sub-scanning direction P by the sub-beams generated by the above LEDs), and overlapping the beams in successive scans in the cross-scan direction such that all written areas of the surface are written on during at least two scans (the sub-beams are overlapped in the overlapping region 450 where at least one main scanning line is formed by exposure of two successive main scan operations, wherein, in one embodiment, the dots of the main scanning line not formed during the preceding scan operation being formed during the succeeding scan operation, and in another embodiment, the same dots being formed by overlapping during the successive scan operations) (see col. 17, lines 5-21 and col. 19, line 50 to col. 20, line 11, respectively). Yoshida further teaches the above scan operation being repeated as many times as required until the exposure of the surface is complete (col. 15, lines 55-57).

With regard to claim 104, Yoshida further teaches different beams being modulated at different energy level to produce the overlapped dots (452 and 454) of complementary densities during the successive scan operations such that the combined density at the overlapped dots is equal to the intended configuration (col. 19, line 50 to col. 20, line 11).

3. Claims 92-95 are rejected under 35 U.S.C. 102(b) as being anticipated by Takada et al. (U.S. 5,883,732).

Takada et al. discloses an optical scanning apparatus comprising a laser light source for emitting a plurality of beams, a first optical system including a collimator lens (2) and a cylindrical lens (4), a rotating polygon mirror (5), and a second optical system including an imaging lens (6), which focuses the beams on the surface (7) in both main and sub-scanning directions, wherein the cylindrical lens (4) focuses the beams in only the sub-scanning direction to form a line image on the reflecting surface of the polygon mirror while the imaging lens (6) has an f-θ characteristic for tilt correction and is designed to create negative distortion so as to effectively correct the aberrational characteristics concerning the curvature of the field (e.g., forming a planar image at the surface to be scanned), and the scanning linearity (e.g., correcting the deviation of the beam spots in the cross-scan direction along the main scan direction such that all the scanning lines have uniform intervals) (col. 1, lines 6-11 and col. 4, lines 34-65).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 96-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takada et al. in view of Sasada et al. (U.S. 4,946,234).

Takada et al. discloses all the basic limitations of the claimed invention except for the data source that changes the data modulating the beam to compensate for the systematic cross scan direction.

Sasada et al. discloses an optical scanning apparatus comprising the modulation of a multiple light beams by a multi-channel AOM (13) to scan the photosensitive surface (19), wherein the amount of deviation of the laser beams scanning the surface from the desired position in the sub-scanning direction caused by the characteristics of the scanning lens (18) is detected by the light beam detection circuit (30) and stored in a look-up table (31) as modulation data such that the distortion corresponding to the detected position is cancelled.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Takada et al. to provide the look-up table containing the detected positional deviation of the beams as taught by Sasada et al. The motivation for doing so would have been to dynamically and accurately correct the positional beam deviation at the surface to be scanned caused by the characteristics of the scanning lens.

Allowable Subject Matter

6. Claims 32-38, 91-83, 102, 111-115 are allowed.

7. Claims 8-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments with respect to claims 1-7, 92-101 and 104 have been considered but are moot in view of the new grounds of rejection presented in this Office action.

Conclusion

9. Applicant's amendment, which changes the scope of each of the base claims, necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hai Pham

HAI PHAM
PRIMARY EXAMINER
June 7, 2004